

REMARKS

Claims 1-20 are pending in this application. By this Amendment, the specification and claims 1, 10-12 and 18-20 are amended. No new matter is added.

The courtesies extended to Applicant's representative by Examiner Kau at the interview held May 27, 2009, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below, which constitute Applicant's record of the interview.

I. Claim 19 Defines Statutory Subject Matter

Claim 19 is rejected under 35 U.S.C. §101 for allegedly being directed to non-statutory subject matter. This rejection is respectfully traversed.

The Office Action alleges that the recited "storage medium" may be considered to encompass a "signal" based on Applicant's recitation on pages 25-26. As discussed during the interview, specific examples of a storage medium include opto-magnetic disk 111, optical disk 112, magnetic disk 113 and memory 114 as acknowledged in the Office Action. Thus, the storage medium is capable of storing the program. A transitory "signal" merely transmits data, and does not store data. At the suggestion of the Examiner, Applicant's specification is revised to remove reference to any transitory signals and clarifies that the storage medium is a tangible medium, as evidenced by the specific hardware examples given in the specification. No new matter is added. Thus, it is clear, when read in light of Applicant's disclosure, that the recited "storage medium" does not encompass a carrier wave or signal. Claim 19 is thus statutory. Withdrawal of the rejection is respectfully requested.

II. Pending Claims Define Patentable Subject Matter

Claims 1, 8-10 and 17-20 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 6,917,704 (Kojima) in view of newly cited U.S. Patent No. 6,608,942 to Le; claims 2, 3, 6, 11, 12 and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kojima and Le

in view of U.S. Patent No. 6,108,441 (Hiratsuka); claims 7 and 16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kojima and Le in view of U.S. Patent No. 6,575,096 (Caruthers); claims 13 and 4 are rejected under 35 U.S.C. §103(a) over Kojima and Le in view of Hiratsuka, and further in view of U.S. Patent Application Publication No. 2002/0090133 (Kim); and claims 5 and 14 are rejected under 35 U.S.C. §103(a) over Kojima and Le in view of Hiratsuka, and further in view of U.S. Patent Application Publication No. 2002/0044691 (Matsugu). These rejections are respectfully traversed.

A. Rejections of Independent Claims 1, 10, 19 and 20

As discussed during the interview, independent claim 1 was previously amended to recite "the reproduction color being located between the representative color and the target color, and the reproduction color having a reproduction distance, which is a distance between the representative color and the reproduction color, wherein the reproduction distance decreases with increase in the color adjustment distance when the color adjustment distance is larger than a certain value." As also discussed during the interview, this is shown, for example, in Applicant's Fig. 6 and described on the top of page 16 and achieves an improved color representation. Independent claims 10, 19 and 20 were similarly amended to recite the relationship in this underlined passage.

As discussed during the interview, it is believed that this emphasized passage has not been fully considered and given patentable weight.

Examiner Kau alleged during the interview that the "variance" in Kojima (cols. 4-6) corresponds to the claimed color adjustment distance and the split into two areas above/below the average corresponds to setting of a reproduction distance with a decreased relationship. Applicant disagrees.

As discussed during the interview, while a target color is selected based on the alleged maximum "variance" in Kojima, reproduction color between a representative color and the

target color is based on a comparison with an "average" value of a region in Kojima (col. 5, lines 28-48). In particular, color values are changed to "0" or "1" depending on whether each pixel is above or below the average value for the image region, and thus not based on the "variance." Thus, regardless of whether a color adjustment distance increases or decreases, the value for the adjusted color is based on being below or above the average of the region. That is, even values below the average that are turned to "0" are all equally set to "0" regardless of distance to a target color. Thus, one of ordinary skill in the art would not have considered the teachings on cols. 4-6 of Kojima to teach a decrease the reproduction distance when the color adjustment distance is larger than a certain value, such as shown in samples F and G of Applicant's Fig. 6.

As also discussed during the interview, the alleged maximum "variance" is determined based on an individual color component, such as one of R, G or B. The "variance" is taught in Kojima in equation (2) (col. 5, lines 50-60) to be the sum of differences between individual pixels and the average pixel value for that individual color component (R, G or B).

This comparison of values with respect to a single color component of a color space is not a color adjustment distance in a color space between a representative color and a target color, which in the specification is defined as an "Euclidean" distance in a color space (Applicant's pg. 9) between two colors in the color space. Instead, as discussed, the variances are just one component of RGB and refer to a sum of differences. Thus, the alleged "variance" does not correspond to a distance in the color space between a target color and a representative color, but is instead a value used to define and set the target value with respect to an individual color component. Should the Examiner disagree, the Examiner is requested to clarify how a "variance" as defined in Kojima would be understood by one of ordinary skill in the art to be equated to a distance as claimed.

Additionally, as admitted, Kojima fails to teach "that the color adjustment distance is larger than a certain value." For this the Office Action relies on Le (col. 20, line 65 to col. 21, line 4). However, the passage cited in Le checks to see if a difference in intensity values of the target pixel and the relevant surrounding pixel is greater than the predetermined intensity threshold. If so, the edge of the target pixel is set ON. Thus, Le fails to teach the specific resultant change in reproduction distance based on the "when" condition recited in claim 1 (decreasing with increase in color adjustment distance) and merely sets forth a threshold condition. Accordingly, Le fails to overcome deficiencies of Kojima with respect to independent claims 1, 10, 19 and 20.

To even further distinguish over Kojima and Le, claims 1, 10, 19 and 20 are revised to clarify that the distance is "an Euclidean distance" in a color space. Also, the "when" condition has been further defined consistent with Figs. 4 and 6 to include an increasing relationship with the color adjustment distance when below a certain value and a decreasing relationship with the color adjustment distance when above the certain value. Clearly, Kojima and Le fail to teach or provide a rationale to include these features. Accordingly, the independent claims 1, 10, 19 and 20 and claims dependent therefrom distinguish over Kojima and Le. The various secondary references fail to overcome the deficiencies of Kojima and Le. Withdrawal of the rejections is respectfully requested.

B. Rejection of Independent Claim 11

Independent claim 11 also recites that the reproduction distance "decreases with increase in the color adjustment distance when the color adjustment distance is larger than a certain value." Moreover, claim 11 recites a reproduction distance coefficient calculation unit that calculates a reproduction distance coefficient.

The Office Action alleges that a reproduction distance exists in Kojima because the reproduced color is based on the result of calculating the average color (Fig. 5, col. 5, line 26

to col. 6, line 38). Again, during the interview, the Examiner equated variance to a color adjustment distance and the splitting by comparison to an average as meeting the "decreases with increase" feature. Applicant disagrees.

As discussed above with respect to claim 1, a reproduction distance in Kojima does not differ based on the distance (such as shown in Applicant's Fig. 6), but instead based on a comparison with the average of the pixels in each divided region. Additionally, there is clearly no rationale provided to decrease the reproduction distance with increase ...when the color adjustment distance is larger as claimed and shown, for example, in samples F and G in Applicant's Fig. 6. Moreover, the alleged "variance" is with reference to a single component (R, G or B) of an image and thus not a distance in a color space. Thus, Kojima fails to teach features of independent claim 11.

Le fails to overcome deficiencies of Kojima with respect to independent claim 11.

The Office Action alleges that Hiratsuka teaches a reproduction distance coefficient calculation unit (Figs. 1 and 2) for calculating a reproduction distance coefficient (luminosity, chroma and hue parameters), which is used to calculate a reproduction color expressing the representative color of the specific region of the color adjustment (col. 11, lines 11-40; col. 13, lines 10-30), and reproduction color calculation unit that calculates the reproduction color on the basis of the reproduction distance coefficient (col. 11, lines 11-40; col. 13, lines 10-30). Applicant disagrees.

The color distance calculation equations in col. 11, lines 11-40, and col. 13, lines 10-30 are to calculate an Euclidean distance between the interpolated color and the designated color in the color space to obtain the interpolated color (Abstract). Hiratsuka uses these distances to interpolate the color adjustment in a five-dimensional table and to calculate accurate level of a reference point (lattice point) (col. 10, line 64 to col. 11, line 3). The distance calculated by these equations is not used to obtain a reproduction distance

coefficient, as recited in claim 11, which has the specified relationship of a decrease when the distance is larger than a certain value and an increase when the distance is smaller than the certain value.

Thus, independent claim 11 and claims dependent therefrom distinguish over Kojima in view of Le and Hiratsuka.

Accordingly, for at least the above reasons, independent claim 11 and claims dependent therefrom are patentable over the applied references. Withdrawal of the rejections is respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the pending claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Stephen P. Catlin
Registration No. 36,101

JAO:SPC/hlp

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OLIFF & BERRIDGE, PLC
P.O. Box 320850
Alexandria, Virginia 22320-4850
Telephone: (703) 836-6400

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